



# Y6

## Planning overview

Statutory Requirement	Aut	Spr	Sum
<b>Number : number and place value</b>			
read, write, order and compare numbers up to 10 000 000 and determine the value of each digit	✓	✓	
round any whole number to a required degree of accuracy	✓	✓	
use negative numbers in context, and calculate intervals across zero		✓	✓
solve number and practical problems that involve all of the above.	✓	✓	
<b>Number : addition, subtraction, multiplication &amp; division</b>			
multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication	✓	✓	✓
divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context	✓	✓	✓
divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context	✓	✓	✓
perform mental calculations, including with mixed operations and large numbers	✓	✓	✓
identify common factors, common multiples and prime numbers			✓
use their knowledge of the order of operations to carry out calculations involving the four operations		✓	✓
solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why			✓
solve problems involving addition, subtraction, multiplication and division	✓	✓	✓
use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.	✓	✓	✓
<b>Ratio &amp; Proportion</b>			
solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts	✓	✓	✓
solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison	✓	✓	✓
solve problems involving similar shapes where the scale factor is known or can be found	✓	✓	✓
solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.	✓		
<b>Algebra</b>			
use simple formulae	✓	✓	
generate and describe linear number sequences		✓	
express missing number problems algebraically	✓	✓	
find pairs of numbers that satisfy an equation with two unknowns	✓	✓	
enumerate possibilities of combinations of two variables		✓	



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<b>Number : fractions (including decimals and percentages)</b>			
use common factors to simplify fractions; use common multiples to express fractions in the same denomination	✓	✓	✓
compare and order fractions, including fractions > 1		✓	✓
add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	✓	✓	✓
multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$ ]		✓	✓
divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$ ]		✓	✓
associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, $\frac{3}{8}$ ]			✓
identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places			✓
multiply one-digit numbers with up to two decimal places by whole numbers		✓	✓
use written division methods in cases where the answer has up to two decimal places		✓	✓
solve problems which require answers to be rounded to specified degrees of accuracy		✓	✓
recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.		✓	✓
<b>Geometry : properties of shapes</b>			
draw 2-D shapes using given dimensions and angles		✓	✓
recognise, describe and build simple 3-D shapes, including making nets			✓
compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons		✓	✓
illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius		✓	
recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles		✓	✓
<b>Geometry : position &amp; direction</b>			
describe positions on the full coordinate grid (all four quadrants)		✓	✓
draw and translate simple shapes on the coordinate plane, and reflect them in the axes.		✓	✓



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<b>Measurement</b>			
solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate		✓	✓
use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places		✓	✓
convert between miles and kilometres		✓	✓
recognise that shapes with the same areas can have different perimeters and vice versa	✓		✓
recognise when it is possible to use formulae for area and volume of shapes	✓		✓
calculate the area of parallelograms and triangles	✓		✓
calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm <sup>3</sup> ) and cubic metres (m <sup>3</sup> ), and extending to other units [for example, mm <sup>3</sup> and km <sup>3</sup> ]			✓
<b>Statistics</b>			
interpret and construct pie charts and line graphs and use these to solve problems	✓		✓
calculate and interpret the mean as an average	✓	✓	